

INTERNATIONAL SEARCH REPORT

International Application No

PCT/DE 03/01202

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B29C45/00 B29C49/06 B29C49/64

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B29C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-------------------------|
| X | US 4 690 633 A (HUGHES GARY ET AL) 1 September 1987 (1987-09-01) | 1-4, 7, 8, 14 |
| Y | column 8, line 22 - line 42; figure 7 | 5, 6, 9-13, 15-33 |
| Y | PATENT ABSTRACTS OF JAPAN vol. 005, no. 190 (M-100), 4 December 1981 (1981-12-04) & JP 56 113433 A (INOUE MTP CO LTD), 7 September 1981 (1981-09-07) abstract | 5, 6, 9-13, 15-33 |
| Y | US 6 332 770 B1 (BRAND TIEMO ET AL) 25 December 2001 (2001-12-25) column 5, line 63 - line 65 column 6, line 2 - line 3 | 11, 27-33 |
| | -/-- | |

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

14 August 2003

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| Y | PATENT ABSTRACTS OF JAPAN vol. 1996, no. 02, 29 February 1996 (1996-02-29) & JP 07 276485 A (UBE IND LTD), 24 October 1995 (1995-10-24) abstract | 31-33 |
| A | EP 0 763 415 A (HERBST RICHARD) 19 March 1997 (1997-03-19) column 3, line 49 - line 51; figure 3B column 4, line 18 - line 20 | 1-13 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/DE 03/01202

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|---|----|---------------------|----------------------------|---------------------|
| US 4690633 | A | 01-09-1987 | US 4522581 A | 11-06-1985 |
| | | | AT 56913 T | 15-10-1990 |
| | | | AT 68122 T | 15-10-1991 |
| | | | AU 587390 B2 | 17-08-1989 |
| | | | AU 4611185 A | 13-03-1986 |
| | | | AU 577237 B2 | 15-09-1988 |
| | | | AU 8298987 A | 28-04-1988 |
| | | | BR 8503208 A | 09-12-1986 |
| | | | CA 1289503 C | 24-09-1991 |
| | | | CA 1289504 C2 | 24-09-1991 |
| | | | DE 3579876 D1 | 31-10-1990 |
| | | | DE 3584375 D1 | 14-11-1991 |
| | | | EP 0173818 A2 | 12-03-1986 |
| | | | EP 0266804 A2 | 11-05-1988 |
| | | | US 4793960 A | 27-12-1988 |
| | | | US 4729732 A | 08-03-1988 |
| | | | JP 1715050 C | 27-11-1992 |
| | | | JP 4002421 B | 17-01-1992 |
| | | | JP 61076342 A | 18-04-1986 |
| JP 56113433 | A | 07-09-1981 | NONE | |
| US 6332770 | B1 | 25-12-2001 | US 2002028265 A1 | 07-03-2002 |
| JP 07276485 | A | 24-10-1995 | NONE | |
| EP 0763415 | A | 19-03-1997 | DE 19532969 A1 | 13-03-1997 |
| | | | EP 0763415 A1 | 19-03-1997 |